

Status of All Claims in the Application:

1-6. (Canceled)

Sub 33
7. (Currently Amended) The disk drive of claim [[6]] 54 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

8. (Currently Amended) The disk drive of claim [[6]] 54 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

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9. (Currently Amended) The disk drive of claim [[6]] 54 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

10. (Currently Amended) The disk drive of claim [[6]] 54 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

11. (Currently Amended) The disk drive of claim [[6]] 54 wherein each layer is made of a metal.

12. (Currently Amended) The disk drive of claim [[6]] 54 wherein the first layer is made of steel and the second layer is made of titanium.

13-16. (Canceled)

17. (Original) A disk drive comprising:
a drive housing;
a storage disk coupled to the drive housing; and

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a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster, the adjuster including a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

18. (Original) The disk drive of claim 17 wherein the adjuster increases the gram load that is applied to the slider as the temperature near the adjuster decreases.

19. (Original) The disk drive of claim 18 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

20. (Original) The disk drive of claim 18 wherein the gram load increases at least approximately seven percent for a twenty °C decrease in temperature.

21. (Original) The disk drive of claim 18 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

22. (Original) The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

23. (Original) The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

24. (Original) The disk drive of claim 17 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

25. (Original) The disk drive of claim 17 wherein the coefficient of thermal

expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

26. (Original) The disk drive of claim 17 wherein each layer is made of a metal.

27. (Original) The disk drive of claim 17 wherein the first layer is made of steel and the second layer is made of titanium.

28. (Original) The disk drive of claim 17 wherein the head arm assembly includes a load beam and the adjuster is a part of the load beam.

29. (Original) The disk drive of claim 17 wherein the head arm assembly includes an arm beam and the adjuster is a part of the arm beam.

30. (Original) A disk drive comprising:

a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an arm beam, a load beam coupled to the arm beam, and a slider coupled to the load beam, wherein at least one of the beams includes an adjuster that increases the gram load that is applied to the slider as the temperature near the adjuster decreases, the adjuster including a first layer and a second layer that is secured to the first layer, the first layer has a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

31. (Original) The disk drive of claim 30 wherein the gram load increases at least approximately four percent for a twenty °C decrease in temperature.

32. (Original) The disk drive of claim 30 wherein the gram load increases at

least approximately seven percent for a twenty °C decrease in temperature.

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33. (Original) The disk drive of claim 30 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

34. (Original) The disk drive of claim 30 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

35. (Original) The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

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36. (Original) The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

37. (Original) The disk drive of claim 34 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

38. (Original) The disk drive of claim 30 wherein the first layer is made of steel and the second layer is made of titanium.

39-45. (Canceled)

46. (Currently Amended) The method of claim ~~45~~ 59 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

47. (Currently Amended) The method of claim 45 59 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

48. (Currently Amended) The method of claim 45 59 wherein the coefficient of thermal expansion of the first layer is at least approximately twenty-five percent greater than the coefficient of thermal expansion of the second layer.

49. (Currently Amended) The method of claim 45 59 wherein the coefficient of thermal expansion of the first layer is at least approximately fifty percent greater than the coefficient of thermal expansion of the second layer.

50. (Currently Amended) The method of claim 45 59 wherein each layer is made of a metal.

51. (Currently Amended) The method of claim 45 59 wherein the first layer is made of steel and the second layer is made of titanium.

52. (Previously presented as dependent claim 3) A disk drive comprising:
a drive housing;
a storage disk coupled to the drive housing; and
a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster; wherein the adjuster increases the gram load that is applied to the slider by at least approximately four percent as the temperature near the adjuster decreases by twenty °C.

53. (Previously presented as dependent claim 4) A disk drive comprising:
a drive housing;
a storage disk coupled to the drive housing; and

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a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster; wherein the adjuster increases the gram load that is applied to the slider by at least approximately seven percent as the temperature near the adjuster decreases by twenty °C.

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54. (Previously presented as dependent claim 6) A disk drive comprising:
a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster; the adjuster including a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer, the adjuster changing the gram load that is applied to the slider as the temperature near the adjuster changes.

55. (Previously presented as dependent claim 13) A disk drive comprising:
a drive housing;

a storage disk coupled to the drive housing; and

a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster; the adjuster including a first layer and a second layer that is secured to the first layer, the first layer having a modulus of elasticity that is different from a modulus of elasticity of the second layer, the adjuster changing the gram load that is applied to the slider as the temperature near the adjuster changes.

56. (Previously presented as dependent claim 16) A disk drive comprising:
a drive housing;

a storage disk coupled to the drive housing; and

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a head arm assembly coupled to the drive housing, the head arm assembly including an adjuster and a slider coupled to the adjuster, the adjuster including a first layer and a second layer, the first layer having a different material composition than the second layer, the adjuster changing the gram load that is applied to the slider as the temperature near the adjuster changes.

57. (Previously presented as dependent claim 41) A method for maintaining a slider within a desired flying height as temperature changes, the method comprising the steps of:

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increasing the gram load that is applied to the slider by at least approximately four percent as the temperature decreases by twenty °C to maintain the slider within a desired flying height.

58. (Previously presented as dependent claim 42) A method for maintaining a slider within a desired flying height as temperature changes, the method comprising the steps of:

increasing the gram load that is applied to the slider by at least approximately seven percent as the temperature decreases by twenty °C to maintain the slider within a desired flying height.

59. (Previously presented as dependent claim 45) A method for maintaining a slider within a desired flying height as temperature changes, the method comprising the steps of:

adjusting the gram load applied to the slider as temperature changes with an adjuster that is coupled to the slider to maintain the slider within the desired flying height, the adjuster having a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

60. (New) A disk drive comprising:
a drive housing;

a drive circuitry; and

a head arm assembly coupled to the drive housing, the head arm assembly including (i) a load beam that is electrically isolated from the drive circuitry, (ii) a slider that is connected to the drive circuitry, the slider being supported by the load beam, and (iii) an adjuster that is coupled to the load beam, the adjuster adjusting the gram load applied to the slider based on the temperature of the adjuster.

61. (New) The disk drive of claim 60 wherein the adjuster increases the gram load that is applied to the slider as the temperature near the adjuster decreases.

62. (New) The disk drive of claim 60 wherein the adjuster decreases the gram load that is applied to the slider as the temperature near the adjuster increases.

63. (New) The disk drive of claim 60 wherein adjuster includes a first layer and a second layer that is secured to the first layer, wherein the first layer has a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

64. (New) The disk drive of claim 63 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

65. (New) The disk drive of claim 63 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

66. (New) The disk drive of claim 63 wherein each layer is made of a different composition of metal.

67. (New) The disk drive of claim 63 wherein the first layer is made of steel

and the second layer is made of titanium.

68. (New) The disk drive of claim 60 wherein the adjuster includes a first layer and a second layer that is secured to the first layer, wherein the first layer has a modulus of elasticity that is different from a modulus of elasticity of the second layer.

69. (New) The disk drive of claim 60 wherein the adjuster is directly secured to the load beam.

70. (New) The disk drive of claim 60 wherein the adjuster is incorporated as part of the load beam.

71. (New) The disk drive of claim 60 wherein the head arm assembly includes an arm beam and the adjuster is incorporated as part of the arm beam.

72. (New) The disk drive of claim 71 wherein the head arm assembly includes a second adjuster that is incorporated as part of the load beam.

73. (New) The disk drive of claim 60 wherein the adjuster includes a first layer and a second layer, wherein the first layer has a different material composition than the second layer.

74. (New) A method for maintaining a slider within a desired flying height range as temperature changes within a disk drive, the method comprising the steps of:

coupling the slider to a load beam that is electrically isolated from a drive circuitry; and

adjusting the gram load applied to the slider with an adjuster that moves based on the temperature of the adjuster so that the slider is maintained within the desired flying height range.

75. (New) The method of claim 74 wherein the step of adjusting includes the

step of increasing the gram load that is applied to the slider as the temperature of the adjuster decreases.

76. (New) The method of claim 74 wherein the step of adjusting includes the step of decreasing the gram load that is applied to the slider as the temperature of the adjuster increases.

77. (New) The method of claim 74 wherein the step of adjusting the gram load includes the step of coupling the adjuster to the slider.

78. (New) The method of claim 74 wherein the step of adjusting includes providing an adjuster having a first layer and a second layer that is secured to the first layer, the first layer having a coefficient of thermal expansion that is different from a coefficient of thermal expansion of the second layer.

79. (New) The method of claim 78 wherein the coefficient of thermal expansion of the first layer is greater than the coefficient of thermal expansion of the second layer.

80. (New) The method of claim 79 wherein the coefficient of thermal expansion of the first layer is at least approximately ten percent greater than the coefficient of thermal expansion of the second layer.

81. (New) The method of claim 78 wherein each layer is made of a metal.

82. (New) The method of claim 78 wherein the first layer is made of steel and the second layer is made of titanium.

83. (New) The method of claim 74 wherein the step of adjusting includes incorporating the adjuster as part of the load beam.

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84. (New) The method of claim 74 wherein the step of adjusting includes incorporating the adjuster as part of an arm beam.

85. (New) The method of claim 84 wherein the step of adjusting includes incorporating a second adjuster as part of the load beam.

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